

Abstract

Drive circuit for a switch in a switching converter and method for driving a switch in a switching converter

The present invention relates to a drive circuit for a switch (T) connected to a rectifier arrangement in a switching converter which provides an output voltage (Vout) from an input voltage (Vin), the drive circuit having the following features:

- a controller arrangement (40) having at least one control amplifier (OTA1) and a compensation network (41) having at least one capacitor (C4, C5), a signal dependent on the output voltage (Vout) being fed to said controller arrangement and the latter providing a control signal (S4);
- a protection circuit (30), which is designed to detect at least one critical state of the switching converter and which provides a protection signal (S3) in a manner dependent on the presence of a critical state, the protection circuit (30) having a discharge circuit (32) coupled to the compensation network (41),
- a signal generating circuit (20), to which the control signal (S4) and the protection signal (S3) are fed and which provides a drive signal (S5) having drive pulses according to the protection signal, the duty ratio of which drive signal is dependent on the control signal (S4).

Figure 2